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ABSTRACT

The impact of discontinuing an academic program at St. Edward's University, Texas, was assessed by measurement on three levels: first-level effects on students and faculty; second-level effects on auxiliary offices and related courses and majors; and third-level effects on productivity and a profile of majors. Majors with a higher than average cost per student credit hour were studied. Brief summaries of three majors (unidentified) chosen for review are presented. One major had only one faculty member and nine student majors, and the program had a relatively high cost per student credit hour. The second program accounted for 2 percent of the undergraduate population; the third accounted for 5 percent of the undergraduate population. In making the decisions, the educational needs of students, including the potential student pool, and the problem of faculty tenure were considered important. For example, many nonmajors are taking courses in the program; the university may want to retain some faculty members to teach courses in this area although retaining no formal major. If only majors take courses in the program, all courses in the major may be eliminated and all faculty members let go or given alternate teaching assignments. In addition, if the students in a certain program are all from out of state and that program is discontinued, recruitment may be channeled into other areas. The study methodology will enable the administration to identify the amount of money saved or reallocated by program discontinuance. Faculty salaries, room and board costs, and financial aid awarded are examples of resources that can be saved or reallocated. (SW)

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ASSESSING THE IMPACT OF DISCONTINUING A PROGRAM

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This paper was presented at the Twenty-Second Annual Forum of the Association for Institutional Research held at the Denver Hilton Hotel in Denver, Colorado, May 16-19, 1982. This paper was reviewed by the AIR Forum Publications Committee and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC Collection of Forum papers.

D. R. Coleman, Chairman
Forum Publication
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ABSTRACT

Academic program evaluation is the assessment of a program or major along two dimensions--qualitative and quantitative. In times of retrenchment and accountability, program evaluation may lead to program discontinuance, instead of program renewal. Most program evaluations study the program by itself and not in relation to the university as a whole. The question the university needs to ask is, "Would the financial benefits gained from discontinuing a particular program outweigh the impact discontinuance would have on the various functions of the University as a whole?" The impact that discontinuance would have on a university is measured on three levels in the following manner: First Level Effects involve Student and Faculty data from that area; Second Level Effects are concerned with Auxiliary Offices and Related Courses and Majors; and the Third Level Effects deal with Productivity and a Profile of Majors. Programs to be studied were identified as those majors with a higher than average cost per student credit hour. Data are provided for three majors. Comparisons across these programs on selected data points illustrate implications of the data points. This data may be used under two different circumstances. The first would occur when a university is trying to trim the budget by eliminating programs that represent a cost to the university but do not have much impact on over-all university academic needs. The other type of program discontinuance may occur when there is a period of financial exigency and large reductions in expenses need to be made.

This methodology was developed at a small, private institution to address specific issues for that school; however, the model may be adapted by other institutions to suit their own needs. The methodology was conceived to complement qualitative data, not to take its place.

ASSESSING THE IMPACT OF DISCONTINUING A PROGRAM

In recent years much work has been done in the area of program evaluation - the assessment of the effectiveness, quality and efficiency of an academic program (Braskamp, 1980). These three components have been emphasized differently in various studies. Starkman (1980) discusses the evaluation of the quality of academic programs and the different models of assessment used. The effectiveness component is stressed in the evaluation by the Council on Program Evaluation (COPE) from the University of Illinois at Urbana-Champaign (Miller, 1979). The State University of New York at Buffalo has combined all three components of program evaluation -- quality, need and promise in their terms (Miller, 1979).

These three components all revolve around the quality issue. Mingle (1978) in his study of selected state reviews of academic programs suggests that there are two types of reviews -- quantitative and qualitative. The older type of evaluative review is the quantitative review -- one which tends to evaluate such things as the scope of the program (the number of students, the number of faculty, etc.), the productivity of the program (graduation and retention rates), and a statistical profile of the students enrolled in this program. This type of quantitative study continues to be needed. Even so, more recent approaches have stressed the qualitative approach which includes the criteria of duplication, efficiency, need and effectiveness (Mingle, 1978).

Theoretically, program evaluation has been conducted in order to improve a program (Starkman, 1980). In times of retrenchment and accountability, though, evaluation needs to be done with more practical and financial considerations in mind (Harcleroad, 1980). The Education Commission of the States has

recommended "that the function of program review and evaluation be expanded to include in its scope recommendations on reallocation, reorganization or even discontinuance" (in Harcleroad, 1980).

Historically, there are two basic reasons for discontinuing a program. The first relates to academic viability and the second to cost. When a program is no longer academically viable there are often steps that can be taken before the final act of eliminating the program -- the faculty can be changed, changes in curriculum can be made, and the like. But, when operational costs of the program exceed what the institution is willing to pay, the school needs to seriously consider program discontinuance. The repercussions that may follow discontinuance need to be looked at. This is especially true at small colleges and universities where they are "...constantly struggling to maintain a positive image in order to attract students and persuade potential donors to invest in the institution's future" (Rugg, 1980).

Most program evaluations study the program by itself and not in relation to the University as a whole. Specifically, no studies formally consider the impact on the University if a particular major or program were discontinued. The question from the University's viewpoint is "Would the financial benefits gained from discontinuing a particular program outweigh the impact discontinuance would have on the various functions of the University as a whole?" While the concepts of cost-benefit analysis have recently been applied to education (Frost, 1971), this paper is concerned with quantifying the effects of program discontinuance on a University. The subject of judging the size of those effects will not be discussed. A methodology is provided for determining the impact of program discontinuance.

When a program is discontinued, there are different levels of effect that are manifested. First level effects are those directly involving the students

who are majoring in that area and the faculty who are teaching in that area. Second level effects are those involving different offices on campus (Financial Aid, Special Services, Housing, etc.) and courses taken in and out of this major. Third level effects are those that affect the school in a much broader manner; i.e., retention rates of majors in that area, a profile of the majors, etc.

The question asked by this study is "What would be the total impact on St. Edward's University if this major offering were discontinued?" Data which assess first, second, and third level effects for several majors are presented. Throughout this paper the terms program and major are used interchangeably. While majors were studied at St. Edward's University, the concepts discussed in this report may be applied to programs as well.

METHODOLOGY

St. Edward's University uses cost per student credit hour as their measure of expense of a program. The majors with the highest cost per student credit hour were selected to be included in this study. Also included was a major for which the decision to discontinue had already been made. This paper presents the methodology used to look at each of these majors.

DESCRIPTION OF DATA POINTS

First Level Effects

The two types of data that are presented to show first level effects relate to students and faculty.

Student Data. Data are presented showing the actual number of students who would be directly affected by discontinuing this major, and what year in the program these students are. Information on what percentage of the total

undergraduate enrollment this major accounts for is also given. To track students' satisfaction or dissatisfaction with a major, data are given for the number of students transferring to and from this major.

Faculty Data. The number of faculty members who would be directly affected by discontinuing this major is presented along with information on full-time/part-time status, rank, salary and whether or not the faculty member is tenured. Comparable data are presented for the University as a whole, including information on salary outlay.

Second Level Effects

The major types of data that are presented are data for Auxiliary Offices, students outside of this major taking courses in this major and required courses for students in this area outside of the area.

Auxiliary Offices. These data encompass the various offices with which the students interact. Data on Financial Aid include total dollar amount of grants, scholarships, loans and work study for students in a particular major. Housing data reflect the number of males and females living in dorms, and the total dollar amount of room and board fees received. The number of times these students visited the Health Center is tracked along with the number of tutoring and counseling sessions they attended.

Related Courses and Majors. Included in this section is a breakdown of the number of students taking courses in this area. The number of majors, other students in the Division, and students outside of the Division taking courses in this area is presented. This data shows the pool of students from which the major draws. Also presented are other departmental areas in which courses in this major are required or recommended courses, that may affect the graduation requirements of all students. Courses required outside of this

major show what the impact of discontinuance may be on enrollment in other courses taught at the University.

Third Level Effects

The types of data presented for third level effects are a profile of majors and productivity (graduation and retention rates).

Profile of Majors. This section shows how the students in this major compare to other students in their Division and the student body as a whole on the basis of four variables: sex, average age, residence and full-time/part-time status. These data have implications for recruitment and the University Mission Statement.

Productivity. These data are comprised of the number of degrees granted in this major over the past five years plus the retention rates for students in this major and the University as a whole. Implications concern the effectiveness of this program.

HOW DATA WILL BE USED

Program discontinuance for financial reasons may occur under two different circumstances. The first would occur when a university is trying to trim the budget by eliminating programs that cost the university but do not have much impact on over-all university academic needs. The data points collected would allow an administrator to identify the majors that employ few faculty, have few majors enrolled in them and represent an expense to the Division. The other type of program discontinuance may occur when there is a period of financial exigency and large reductions in expenses need to be made. Programs that cost more than they bring in, and would represent a large savings if eliminated, can be identified. The aim here is to maximize savings (monetary) while minimizing the number of students and faculty who would be affected. While these

objective data points may be gathered, it is ultimately a subjective judgment as to which programs should be eliminated. There are many intangibles that go into making a major what it is. It is the duty of the administrator to take into account the intangibles as well as the tangible facts when deciding whether or not to discontinue a program.

SELECTED PROGRAM REVIEWS

The following is a summary of the three majors that have been chosen for review. Also included is a discussion of the implications for selected data points.

Program A. This is the major for which the decision to discontinue has already been made. This major had a relatively high cost per student credit hour and few students. There is only one faculty member teaching in this area and he is not tenured. Since there are so few students (9) in this major, their impact on the Auxiliary Offices is minimal. Eighty-three percent of the student credit hours taken in this major are taken by students outside of this major. One reason for this large of a percentage is that these courses help to fulfill the students' University Exploration Requirement. There is a larger percentage of male students in this major than in the Division or the University as a whole. These students are slightly younger than the general undergraduate population and are predominantly from foreign countries. All of the students in Program A attend St. Edward's full-time. Thirteen degrees in this major have been awarded in the past four years with no growth potential shown. Because of the small number of entering freshmen (approximately three each year), no conclusions can be drawn concerning retention.

Program B. The students in Program B account for two percent of the undergraduate population. While seven students transferred to this major from other majors, none transferred out of this area during the

Fall 1981 semester. There are two full-time faculty members teaching in this major, none of which are tenured. Students in Program B make up three percent of the undergraduate grant and scholarship recipients. They account for two percent of the students living in dorms and two percent of the students visiting the Health Center. A majority of the students taking courses in this major are from this major. Close to three-quarters of the students in Program B are female and they are an average of one year older than the average undergraduate. A majority of these students are from the Austin area. Three-quarters of the students in this major attend school full-time. Forty-three students have received degrees in this major in the last four years. Retention rates for entering freshmen in this major have fallen in recent years.

Program C. The students enrolled in Program C account for five percent of the undergraduate population. Three students transferred to this major from other majors while six students transferred out. There are eight faculty members teaching in this area, four are full-time and four are part-time. One faculty member from this area is tenured. Students in this major receive ten percent of the grants and scholarships awarded. They account for ten percent of the students living in dorms and eight percent of the students visiting the Health Center. Of all undergraduates receiving university sponsored tutoring or counseling, two percent are from Program C. Ninety-one percent of the student credit hours taken in this area are taken by students who are majors in this area. A majority of students in this major are female and these students average over three years younger than the undergraduate population. Three-quarters of these students are from out-of-state and 97% are enrolled full-time. Sixty-nine students have received degrees from Program C during the past five years. Although the number of first-time entering freshmen for this major has fallen in the past year, the overall retention rates have been above those for the University as a whole.

Discussion of Selected Data Points. Comparisons across programs illustrate some of the implications of the data points. For the Second Level Effect - Related Courses and Majors (see Table I), the three selected majors show marked differences in the distribution of students taking courses in this particular area. For Program A, a majority of the courses in this area are taken by students outside of the division in which the major is located. Program A is the major that has already been discontinued, but is was data such as this that led the Administration to retain an elective sequence of courses in this area although not retaining a formal major. An audience exists for courses in this area in addition to the majors from this area wanting or being required to take these courses. Program C, on the other hand, has 91% of its student credit hours being taken by majors from that area. If this major was discontinued and no courses offered in that area, it would affect few students outside of that major.

Implications for recruitment can be illustrated by comparing across programs for the Third Level Effect - Profile of Majors (see Table II). By looking specifically at the data for residence, a number of recruitment questions may be raised. Over fifty percent of the majors from Program A are International students. If the University foresees any change in the number of International students enrolled, this may affect enrollment in Program A. There is a large local audience for students in Program B. These students are older than the average undergraduate student and they come from the Austin area. They are tied to Austin by jobs and families (22% attend only part-time). Does the University want to continue providing a program for people with this limited mobility? What do these students add to the atmosphere of the University? In contrast to Program B, 76% of the students in Program C are from out-of-state and under the average undergraduate age. With reduced financial aid and a tightening economy, will these students be willing to move to another state

to attend college? What do these young, full-time students add to the atmosphere of the University?

These data points may also help to identify those marginal programs whose impact on the University is slight, but would represent a savings to the school if they were discontinued. Program A is an example of this type of major. There are only nine students enrolled as majors in this program and one non-tenured faculty member teaching in this area. In contrast, Program C would be an example of a program the Administration would look at if there was a period of financial exigency and drastic budget cuts were needed. This program has a high cost per student credit hour and would represent a large financial savings to the University (faculty salaries, etc.) if it were discontinued, but it also represents a great impact on the University (five percent of the undergraduate population, ten percent of the students living in dorms, etc.). The question to be answered by the Administration would be "Would the savings in faculty salaries, cost per student credit hour, etc. outweigh the loss of course offerings, room and board fees, etc. if Program C were to be discontinued?" This methodology is designed to help the Administration make these decisions.

DISCUSSION

In recent years academic program evaluation, in addition to being a way to improve the quality of a program, has been used as a means for determining whether or not a program should be retained. Eugene Craven (1980) writes:

> The much anticipated decade of the 1980's has arrived. The demand for accountability and the conditions of fiscal austerity are expected to continue and, perhaps, to increase. The major new developments of the decade, however, are the projected demographic changes and their anticipated rapid and substantial impact on enrollments and, hence funding of institutions. Academic program evaluation now assumes added importance: What programs are most central to an

> institution's mission? On what basis should decisions of resource reallocation or reduction among programs be made? What fixed resources must be maintained to safeguard the quality of academic programs? How can programs be mounted in financially stringent times to meet the changing educational needs of students, society, and scholarship? The very survival of certain academic programs and even some institutions may be at stake.

To Craven's list of questions I would add "What would be the effect on the institution if a specific major offering was discontinued?" Stated another way, an institution should ask "Given the assumption that since the program has a higher than average cost per student credit hour and eliminating this program would therefore save money, would this savings outweight the impact that discontinuance would have on the various functions of the University as a whole?" A value judgment becomes involved.

The major (First Level) effects concern the students and faculty in this area. There will be a certain number of freshmen, sophomores and juniors whose educational needs will have to be considered. For faculty, the primary concern is with tenured faculty members. By looking at the Second Level Effect of Related Courses and Majors, the potential student pool for courses in this major may be determined. If a lot of non-majors are taking courses in this area, the University may want to retain some faculty members to teach courses in this area although retaining no formal major. If only majors take courses in this area, then all courses in the major may be eliminated and all faculty members let go or given alternate teaching assignments.

Although the function of the entire University is to serve its students, some offices more than others come into day to day contact with students. The amount of contact that students of various majors have with these offices will determine the effect that program discontinuance will have. It must be kept in mind that not all of the impacts will be negative. Financial Aid (except for BEOGs) comes to the University and the school assigns it to the individual students. If a major were eliminated and its majors no longer enrolled, the

Financial Aid could go to other students. This is assuming, though, that if a major is discontinued all of its students would leave as opposed to transferring to other majors. No data are available on which to draw conclusions about this occurrence.

The Third Level Effect concerning Profile of Majors has implications for recruitment and fulfillment of the institution's Mission Statement. For example, the variable of residence may be related to recruitment. If the students in a certain program are all from out of state and that program is discontinued, recruitment may then be channeled into other areas. If part of the University's Mission Statement states that this institution wants to serve all age ranges of students, but a majority of the school's older than average students are in a certain major, the institution may choose not to discontinue that major. The Profile of Majors is a very fertile area for comparisons and insights.

The concept of financial benefits outweighing the impact on the various functions of the University is an important one. Rugg (1980) talks about the hidden financial impacts:

> ...promises of future savings or cost avoidance must be weighed against possible financial losses, which can include reductions in tuition revenues resulting from smaller student enrollment, reduced revenues in auxiliary enterprises such as dormitory housing and food services, reduced gift income, and special expenses such as severance payments for tenured faculty who are terminated or unemployment benefits to released personnel. Some of these financial losses result directly from the closing of programs, while others may arise as a result of the discontinuance process itself and the negative public relations created.

In addition to the repercussion of possible financial loss due to program discontinuance, a more basic question needs to be raised: "If the purpose of reviewing these programs is to save money, how much money will actually be saved if this program is discontinued?" Kubal (1979) surveyed state agencies and of the 20 respondents who reported having discontinued programs, 95% did

not know the amount of resources saved or reallocated, and only 35% of those respondents believed that resources had been saved. The methodology presented here will enable the administration, to a certain extent, to identify the amount saved or reallocated. Faculty salaries, room and board fees and Financial Aid awarded are examples of resources saved or reallocated.

The methodology presented here was developed at a small, private institution to address specific issues for that school. While this exact methodology may not be suitable for all programs or institutions, the model may be adapted by other institutions to suit their own needs. Even for St. Edward's University, the model was not as complete as hoped for. There are limitations on the types of data available. This model was originally visualized as presenting longitudinal data to show trends in the different programs, but that did not prove to be feasible because of unobtainable data. The central issue of this study is a concept that can be used at any institution: "What would be the impact on this institution if this program was discontinued?" This methodology was conceived to complement qualitative data, not to take its place.

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TABLE I

SECOND LEVEL EFFECTS

RELATED COURSES AND MAJORS

	Program A	Program B	Program C
Majors taking courses in this area	17%	55%	91%
Other students in Division taking courses in this area	17%	25%	3%
Students outside of Division taking courses in this area	66%	20%	7%
Total number of students taking courses in this area	47	115	196

TABLE II

THIRD LEVEL EFFECTS

PROFILE OF MAJORS

	Program A	Program B	Program C	All Undergraduates
Sex				
Male	78%	29%	37%	56%
Female	22%	71%	63%	44%
Average Age	22.5	24.9	19.7	24.0
Residence				
Austin	-	57%	7%	35%
Texas, not Austin	22%	31%	17%	32%
Out-of-state	22%	11%	76%	14%
International	56%	-	-	19%
Status				
Full-time	100%	78%	97%	79%
Part-time	-	22%	3%	21%